

DYNAMIC INTERNET GATEWAY SERVICE

ABSTRACT

The present invention provides for a local network comprising a plurality of interconnected computing devices that dynamically assigns a new Internet gateway server for the local network when the currently assigned Internet gateway is not connected to the local network and the Internet. Each one of the computing devices capable of connecting to the Internet is given a different connection priority, which indicates the desirability of assigning the respective computing device as the Internet gateway server. When a computing device in the local network is unable to access the Internet through the currently assigned Internet gateway server, the computing device broadcasts a message to the entire local network requesting to become the new Internet gateway server. The request to become the gateway includes the connection priority of the computing device. Each computing device on the local network capable of connecting to the ISP responds to each request to become the gateway having a lower connection priority by broadcasting its own request to become the gateway. The computing device having the highest connection priority in the local network receives no response from the other computing devices to its requests to become the gateway. When this occurs, the computing device having the highest connection priority assigns itself as the new Internet gateway for the local network.